

U.S. Patent Application Serial No. 09/866,180
Reply to Office Action dated November 16, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Previously presented) Spirally-rolled electrodes for batteries comprising a concentric circle shape or an elliptic shape with a thin nickel positive electrode and a thin metal hydride negative electrode which are wound spirally interposing a separator therebetween has the characteristics as below:
 - (1) said thin nickel positive electrode is the electrode around which plural positive electrode plates are wound in series in order;
 - (2) said thin metal hydride negative electrode is the electrode around which one or plural negative electrodes are wound in series in order;
 - (3) plural electrode plates in each electrode are so combined that the total amount of the active material or pseudo-active material is substantially constant;
 - (4) plural electrode plates in each electrode are wound in series with an interval therebetween and;
 - (5) the thickness of an electrode at the side where the winding starts is thinner than the thickness of an electrode at the side where the winding ends in several electrode plates in an electrode comprising several electrode plates.

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5. (Previously presented) Spirally-rolled electrodes for batteries as set forth in claim 4, wherein each of the several electrode plates comprising said positive electrode and said negative electrode has at least two chamfered corners.
6. (Previously presented) Spirally-rolled electrodes for batteries as set forth in claim 4, wherein the interval among the plural electrode plates comprising said positive electrode and/or negative electrode is within the range of 1.0-5.0 mm.
7. (Original) Spirally-rolled electrodes for batteries as set forth in claim 4, wherein each of the several electrodes themselves has substantially the same area.
8. (Canceled)
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Withdrawn) A method for producing batteries comprising:
forming positive and/or negative electrode plates;
classifying the electrode plates into groups by weight;
selecting electrode plates of substantially constant weight from the groups;
spirally rolling the positive and negative electrode plates with a separator between the positive and negative electrode plates, wherein the positive and negative electrode plates are each wound in series with an interval therebetween; and
inserting the spirally rolled positive and negative electrode plates into a metallic case.

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13. (Withdrawn) A battery comprising:
a positive electrode;
a negative electrode; and
a separator disposed between the positive electrode and the negative electrode;
wherein the positive electrode and the negative electrode both comprise a plurality of electrode plates with intervals between the plates;
wherein the electrode plates are selected from among groups of plates classified by weight so that the electrode plates have substantially constant weights;
wherein the positive electrode, the negative electrode, and the separator are configured in a spiral roll.
14. (Withdrawn) The battery of claim 13, wherein each of the electrode plates comprises a lead terminal or a terminal equivalent to a lead terminal.
15. (Withdrawn) The battery of claim 13, wherein each edge of the plates facing the intervals in the plurality of electrode plates is covered by a resin film or wrapped by a strip of separator.
16. (Withdrawn) The battery of claim 14, wherein each of the electrode plates of the positive electrode comprises a metal foil without active materials along the edge of one side of the electrode plate in the winding direction, wherein the metal foil is exposed over a separator.
17. (Withdrawn) A battery comprising:
a nickel positive electrode comprising active or pseudo-active material;
a metal hydride negative electrode comprising active or pseudo-active material; and
a separator disposed between the positive electrode and the negative electrode;

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wherein the positive electrode comprises a plurality of nickel electrode plates, wherein the amount of active material or pseudo-active material is substantially constant among the positive electrode plates;

wherein the negative electrode comprises a plurality of metal hydride plates; wherein the amount of active material or pseudo-active material is substantially constant among the negative electrode plates;

wherein the positive electrode, the negative electrode, and the separator are configured in a spirally wound roll with intervals between the negative electrodes plates and intervals between the positive electrode plates;

wherein the thickness of the positive or negative electrode plates on the side where the winding starts is thinner than the thickness of the positive or negative electrode plates on the side where the winding ends.

18. (Withdrawn) The battery of claim 17, wherein the positive and negative electrode plates have at least two chamfered corners.

19. (Withdrawn) The battery of claim 17, wherein the intervals between the negative electrodes and the intervals between the positive electrodes are a distance in the range of 1.0-5.0 mm.

20. (Withdrawn) The battery of claim 17, wherein the negative electrode plates have substantially the same area and the positive electrode plates have substantially the same area.